AMENDMENTS TO THE CLAIMS

The following listing of claims replaces all prior versions and listings of claims in the above-referenced application:

1. (Currently amended) A method for filtering a received signal in a wireless receiver, comprising:

providing a received signal to a filter chain located between a downconverter and a demodulator, the filter chain comprising an input, a variable gain amplifier and an output; and

inverting the impedance of the received signal in the filter chain using an inductance applied at the output of the amplifier, ~~without interfering with the function of the amplifier~~ the filter chain arranged such that a feedback loop is located between an output of the variable gain amplifier and the output of the filter chain.

2. (Currently amended) The method of claim 1, ~~further comprising~~ wherein inverting the impedance of the received signal at the output of the amplifier comprises using a voltage controlled current source to transform the inductance applied to the received signal to a capacitance.

3. (Original) The method of claim 2, further comprising implementing the voltage controlled current source as a pair of transconductance amplifiers.

4. (Currently amended) The method of claim 3, further comprising ~~implementing the inductance at the output of the amplifier using a pair of voltage controlled current sources and~~ inserting a capacitance at the output of the filter chain.

5. (Currently amended) A low-noise filter for a wireless receiver, comprising:

an amplifier; and

an impedance inverter applied at the output of the amplifier and configured to transform inductance applied to a received signal to a capacitance, ~~without interfering with the function of the amplifier~~ the impedance inverter having a feedback loop located between an output of the amplifier and an output of the low-noise filter.

6. (Canceled)

7. (Currently amended) The low-noise filter of claim ~~6~~ 5, wherein the impedance inverter further comprises:

a pair of transconductance amplifiers; and

at least one capacitance coupled to the output of one of the transconductance amplifiers.

8. (Original) The low-noise filter of claim 7, wherein the impedance inverter removes direct current (DC) offset present at the input of the amplifier.

9. (Currently amended) A portable transceiver, comprising:

a modulator configured to receive and modulate a data signal;

an upconverter configured to receive the modulated data signal and provide a radio frequency (RF) signal;

a transmitter configured to transmit the RF signal; and

a direct conversion receiver having a filter chain including an amplifier, a filter and an impedance inverter configured to transform inductance applied to a received signal to a capacitance, ~~wherein the impedance inverter is applied at an output of the amplifier such that an open circuit exists between the impedance inverter and an input of the amplifier~~ the impedance inverter having a feedback loop located between an output of the amplifier and an output of the filter.

10. (Original) The portable transceiver of claim 9, wherein the impedance inverter further comprises an inductor coupled to the output of the amplifier.

11. (Original) The portable transceiver of claim 10, wherein the impedance inverter further comprises:

a pair of transconductance amplifiers; and

at least one capacitance coupled to the output of one of the transconductance amplifiers.

12. (Original) The portable transceiver of claim 11, wherein the impedance inverter removes direct current (DC) offset present at the input of the amplifier.

13. (Currently amended) A portable transceiver, comprising:

means for modulating a data signal;

means for upconverting the modulated data signal and provide a radio frequency (RF) signal;

means for transmitting the RF signal;

means for converting a received signal to a baseband signal;

means for amplifying the baseband signal; and

means for inverting the impedance of the received signal at the output of the amplifying means to transform inductance applied to a received signal to a capacitance, ~~wherein the means for inverting impedance of the received signal does not affect the means for amplifying the baseband signal~~ the means for inverting the impedance having a feedback loop that bypasses the amplifying means.

14. (Original) The portable transceiver of claim 13, further comprising voltage controlled current source means for inverting the impedance of the received signal at the output of the amplifier to transform the inductance applied to the received signal to a capacitance.

15. (Currently amended) A system for removing direct current (DC) offset from a received signal, comprising:

a variable gain amplifier configured to amplify a received radio frequency (RF) signal to generate an amplified RF signal; and

a gyrator-generated inductance applied at the output of the variable gain amplifier, the gyrator-generated inductance configured to transform inductance present at the output of the variable gain amplifier to a capacitance, ~~without interfering with the function of the variable gain amplifier~~ the gyrator-generated inductance and the variable gain amplifier arranged such that the amplified RF signal is not applied at an input of the variable gain amplifier.

16. (Currently amended) The system of claim 15, wherein the gyrator-generated inductance adds a high pass filter pole ~~to~~ that is not a function of the transconductance of the variable gain amplifier.

17. (Original) The system of claim 15, wherein the gyrator-generated inductance shunts excess DC current present at the output of the variable gain amplifier to ground.

18. (Original) The system of claim15, wherein, at a frequency above a high-pass cutoff frequency, the gyrator-generated inductance appears as a high impedance at the output of the variable gain amplifier.